

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A method of generating a 3-dimensional effect comprising:

providing at least one first image layer of a chiral liquid crystal material, and at least one second image layer of a chiral liquid crystal material, wherein one of said first and second image layers reflects right-handed circularly polarised light and the other reflects left-handed circularly polarised light, and wherein

(a) said first and second image layers each comprise polymerised or crosslinked cholesteric liquid crystal material and are obtained by providing a polymerisable chiral liquid crystal material on a substrate, aligning said material into planar orientation and polymerising said material in its liquid crystal state at a temperature below 60°C, ~~and/or~~ or

(b) said first and second image layers are not directly superimposed onto each other ~~and~~ ~~and/or~~ do not form a stereo pair of images, or

(c) said first and second image layers each comprise polymerised or crosslinked cholesteric liquid crystal material and are obtained by providing a polymerisable chiral liquid crystal material on a substrate, aligning said material into planar orientation and polymerising said material in its liquid crystal state at a temperature below 60°C, and said first and second image layers are not directly superimposed onto each other and do not form a stereo pair of images.

2. (Original): A method according to claim 1, wherein said first and second image layers each comprise polymerised or crosslinked cholesteric liquid crystal material and are obtained by providing a polymerisable chiral liquid crystal material on a substrate, aligning said material into planar orientation and polymerising said material in its liquid crystal state at a temperature below 60°C.

3. (Original): A method according to claim 2, wherein the polymerisable chiral

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liquid crystal material comprises at least one achiral polymerisable mesogenic compound and at least one chiral compound which, optionally, is polymerisable, mesogenic, or both.

4. (Original): A method according to claim 2, wherein said first and second image layers are obtainable by coating or printing a layer of polymerisable chiral liquid crystal material onto the same side or onto opposite sides of a substrate, orienting the material, polymerising the material and optionally removing the substrate from the polymerised layers.

5. (Original): A method according to claim 3, wherein said first and second image layers are obtainable by coating or printing a layer of polymerisable chiral liquid crystal material onto the same side or onto opposite sides of a substrate, orienting the material, polymerising the material and optionally removing the substrate from the polymerised layers.

6. (Original): A method according to claim 1, wherein said first and second image layers comprise encapsulated cholesteric liquid crystal material.

7. (Original): A method according to claim 1, wherein said first and second image layers comprise polymerised cholesteric liquid crystal material.

8. (Previously Presented): A method according to claim 1, wherein said first and second image layers reflect circularly polarised light of different wavelengths.

9. (Previously Presented): A method according to claim 1, wherein said first image layer is provided on a substrate and optionally covered by an intermediate layer, and said second image layer is provided on top of said first image layer.

10. (Original): A method according to claim 9, wherein said substrate comprises a light absorbing material.

11. (Currently Amended): An apparatus for generating a 3-dimensional effect comprising at least one first image layer of a chiral liquid crystal material and at least one second image layer of a chiral liquid crystal material, as defined in claim 1 wherein one of said first and second image layers reflects right-handed circularly polarised light and the other reflects left-handed circularly polarised light, and wherein

(a) said first and second image layers each comprise polymerised or crosslinked cholesteric liquid crystal material and are obtained by providing a polymerisable chiral liquid crystal material on a substrate, aligning said material into planar orientation and polymerising said material in its liquid crystal state at a temperature below 60°C, or

(b) said first and second image layers are not directly superimposed onto each other and do not form a stereo pair of images, or

(c) said first and second image layers each comprise polymerised or crosslinked cholesteric liquid crystal material and are obtained by providing a polymerisable chiral liquid crystal material on a substrate, aligning said material into planar orientation and polymerising said material in its liquid crystal state at a temperature below 60°C, and said first and second image layers are not directly superimposed onto each other and do not form a stereo pair of images.

12. (Original): An apparatus according to claim 11, further comprising a means of detecting the 3-dimensional effect comprising a pair of films, foils, lenses or glasses, one of which transmits the right-handed circularly polarized light and the other transmits the left-handed polarized light reflected by said first and second image layers.

13. (Currently Amended): A 3-dimensional image generated by a method ~~or an~~ apparatus according to claim 1.

14. (Cancelled):

15. (Currently Amended): A security or verification marking or device comprising an

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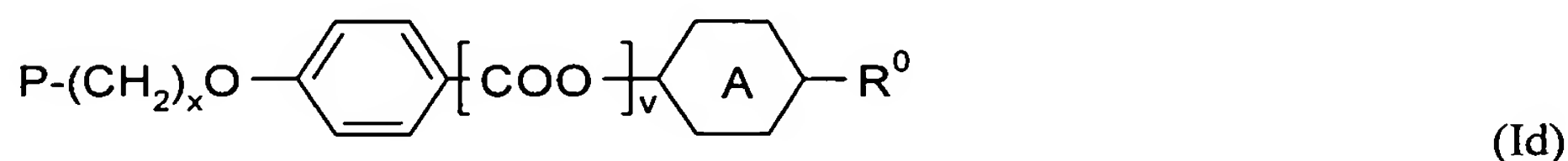
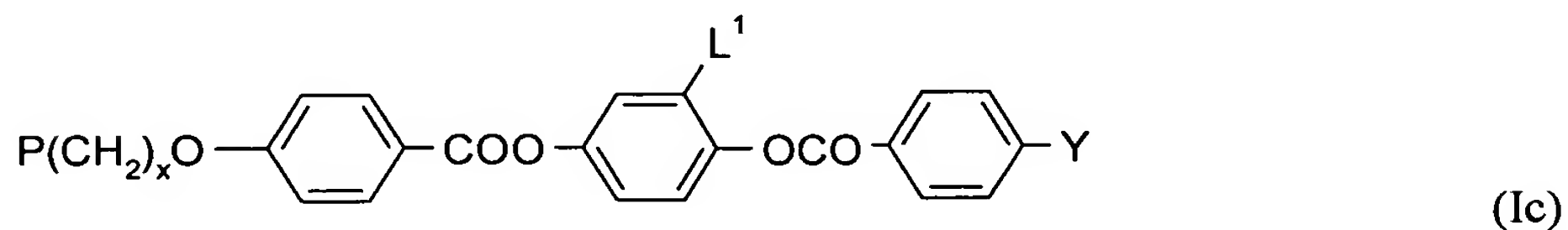
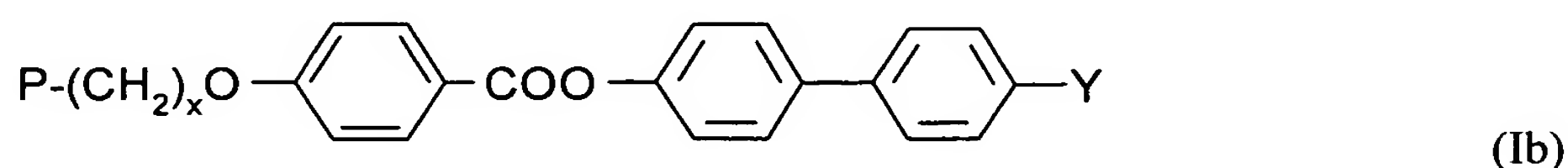
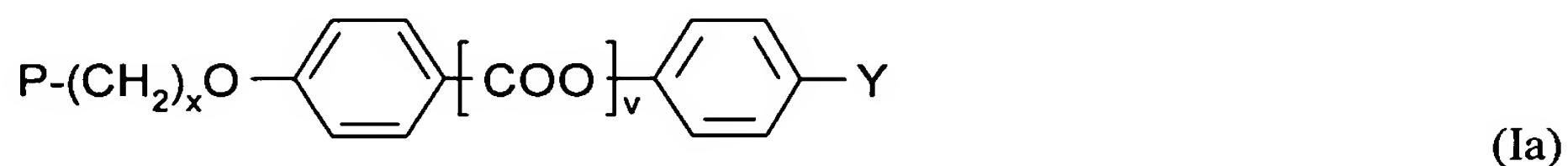
apparatus or image according to claim 11.

16. (Currently Amended): A security device comprising a printed area containing both enantiomeric forms of a chiral liquid crystal material that can be verified from large distances by viewing through a device made from two circular polarisers, one of which is left handed and the other is right handed.

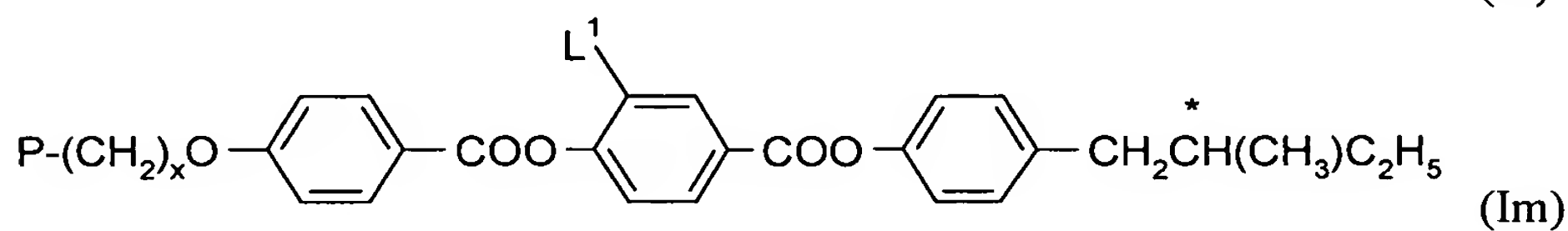
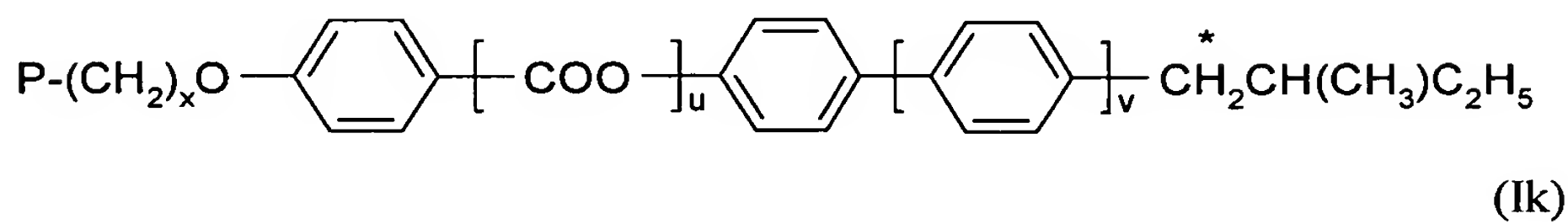
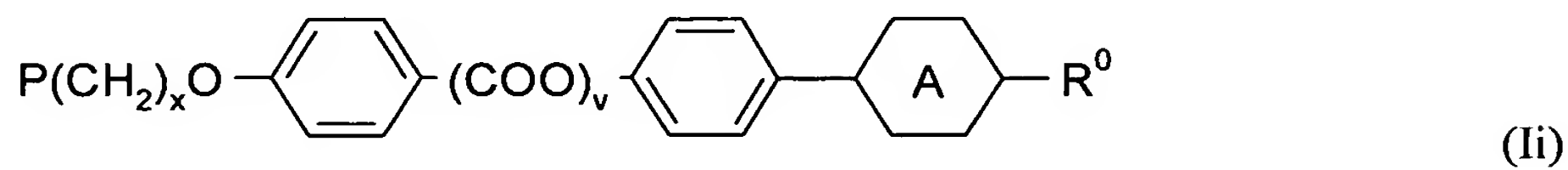
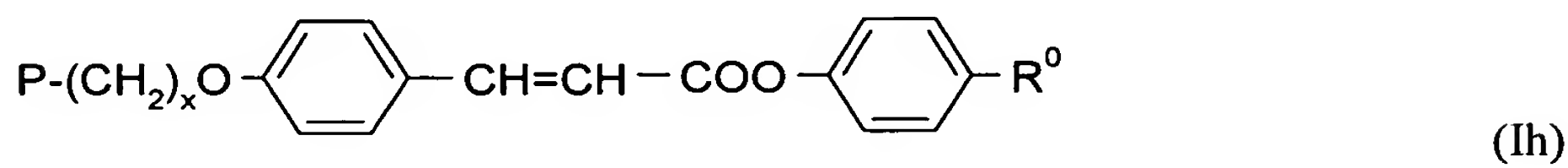
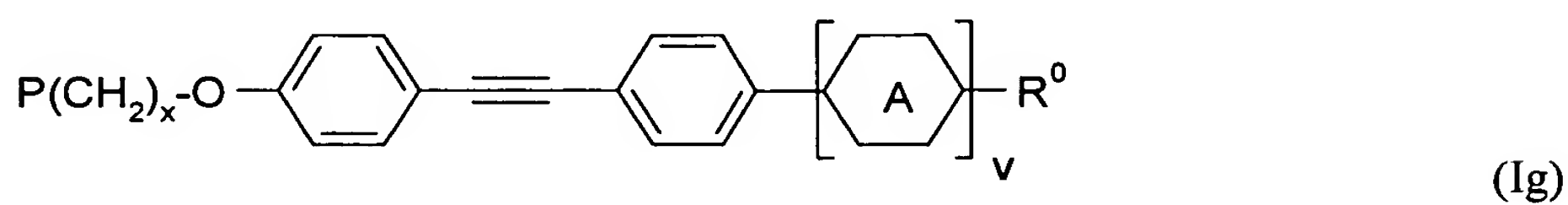
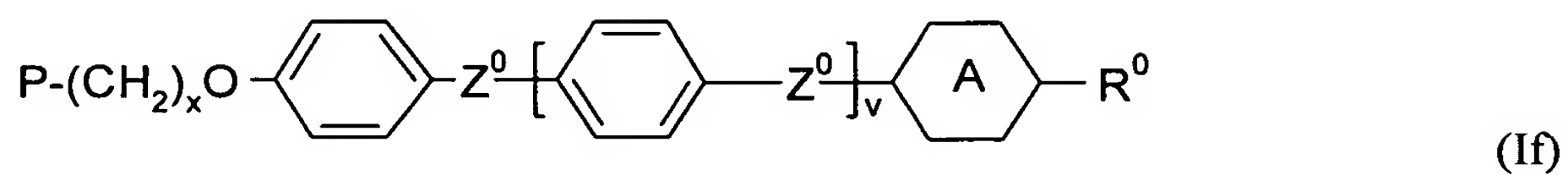
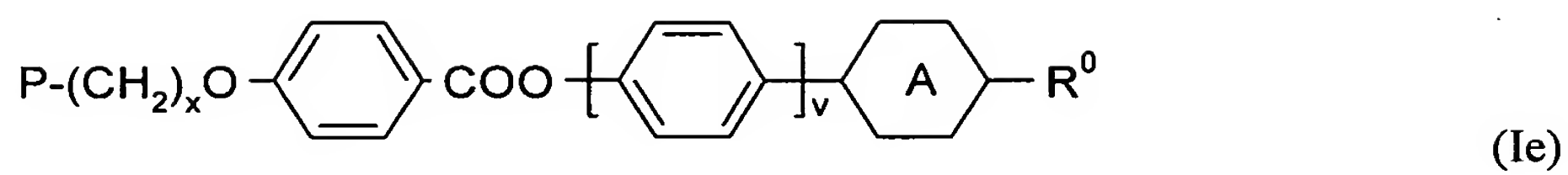
17. (Previously Presented): A document of value comprising a security or verification marking or device according to claim 15.

18. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises at least one monoreactive polymerisable mesogenic compound and at least one di- or multireactive polymerisable mesogenic compound.

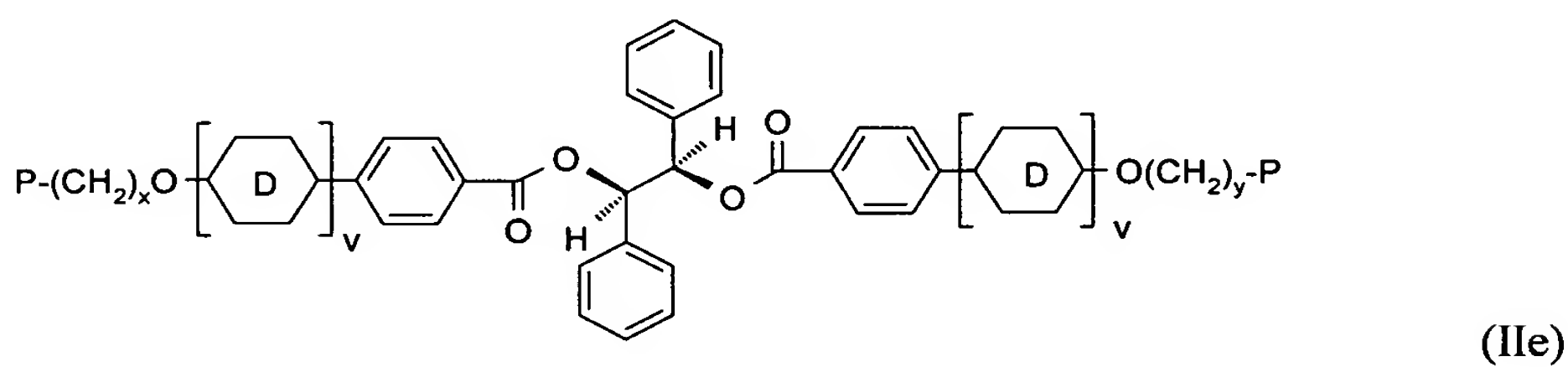
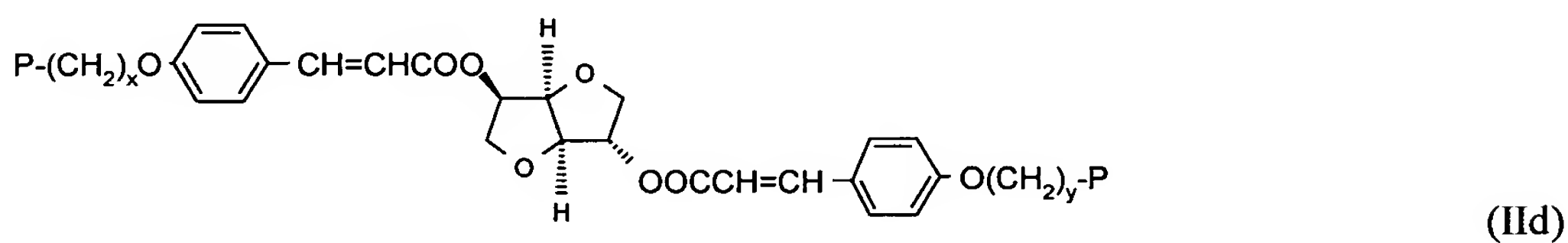
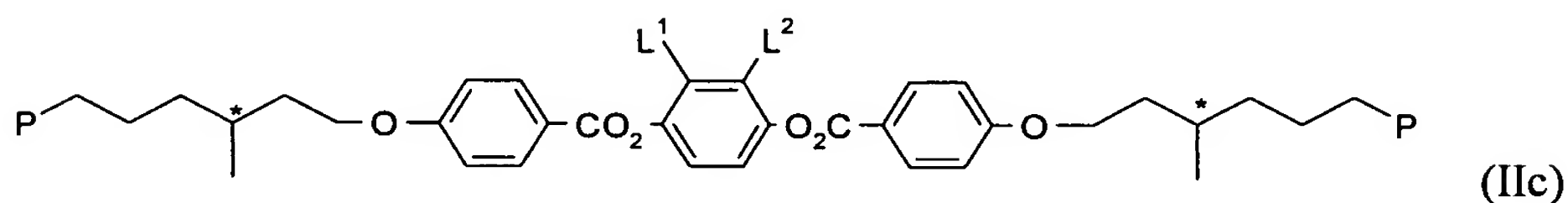
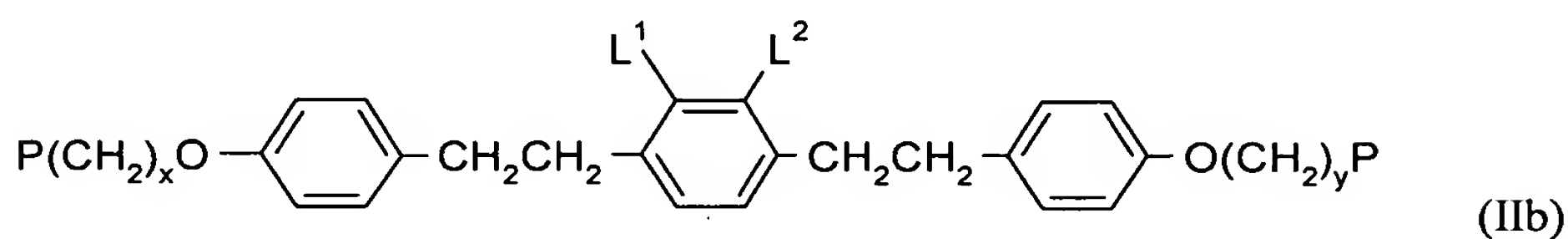
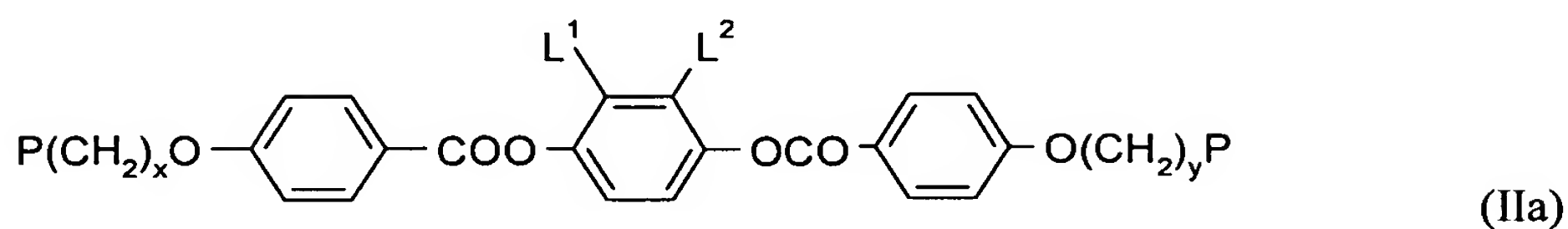
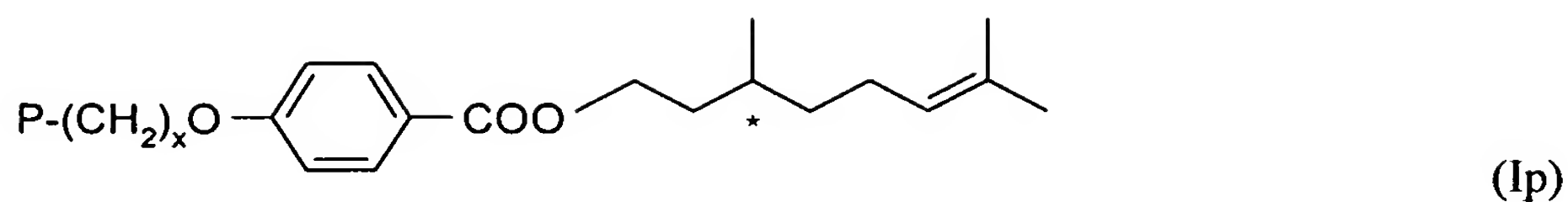
19. (New): A method according to claim 18, wherein said mono- and di- or multireactive polymerisable mesogenic compounds are selected from the following formula:



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wherein

P is a polymerisable group,

x and y are each independently 1 to 12,

A and D are each independently a 1,4-phenylene that is optionally mono-, di- or tri-substituted by L^1 or 1,4-cyclohexylene,

u and v are each independently 0 or 1,

Z^0 is $-\text{COO}-$, $-\text{OCO}-$, $-\text{CH}_2\text{CH}_2-$ or a single bond,

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Y is a group selected from F, Cl, CN, NO₂, OH, OCH₃, OCN, SCN, an optionally fluorinated carbonyl or carboxyl group with up to 4 C atoms or a mono-, oligo-, or polyfluorinated alkyl or alkoxy group with 1 to 4 C atoms,

R⁰ is an unpolar alkyl with 1 to 12 C atoms or an alkoxy group with 2 to 12 C atoms,

Ter is a terpenoid radical,

Chol is a cholesteryl group, and

L¹ and L² are each independently H, F, Cl, CN, an optionally halogenated alkyl with 1 to 7 C atoms, an optionally halogenated alkoxy with up to 7 C atoms, an optionally halogenated alkylcarbonyl with up to 7 C atoms, an optionally halogenated alkoxycarbonyl with up to 7 C atoms or an optionally halogenated alkoxycarbonyloxy group with up to 7 C atoms.

20. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises one or more mono-, di- or multireactive achiral polymerisable mesogenic compounds and one or more chiral compounds which are optionally polymerisable and/or mesogenic.

21. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises

- a) one or more direactive achiral and/or direactive chiral mesogenic compounds, and
- b) one or more monoreactive achiral and/or monoreactive chiral mesogenic compounds,

wherein at least one of components a) and b) comprises a chiral compound.

22. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises

- a) one or more direactive achiral mesogenic compounds,
- b) one or more monoreactive achiral mesogenic compounds, and
- c) one or more non-polymerisable chiral compounds.

23. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises no di- or multireactive achiral mesogenic compounds and essentially

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consists of monoreactive achiral mesogenic compounds and optionally contains non-polymerisable chiral compounds.

24. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material comprises 1 - 50 % of di- or multireactive achiral mesogenic compounds, and 30 - 95 % of monoreactive achiral mesogenic compounds.

25. (New): A method according to claim 24, wherein said polymerisable chiral liquid crystal material further comprises 0.1 - 15 % of non-polymerisable chiral compounds.

26. (New): A method according to claim 19, wherein said monoreactive achiral compounds are selected from formulae Ia-Ig and Ii, and said direactive achiral compounds are selected from formulae IIa and IIb.

27. (New): A method according to claim 1, wherein said polymerisable chiral liquid crystal material contains no more than 15 % of non-polymerisable chiral compounds.